

1. (b)
2. (c)
3. (a)
4. (a)
5. (a)
6. (b)
7. (b)
8. (d)
9. (a)

10. **BAYE'S THEOREM**

Bayes' Theorem states that the conditional probability of an event, based on the occurrence of another event, is equal to the likelihood of the second event given the first event multiplied by the probability of the first event.

It has many real life applications such as in Internet Marketing to profile visitors to a website, in Decision Analysis and Decision Trees

11. **Z – SCORE**

Z-score is a statistical measurement that describes a value's relationship to the mean of a group of values. Z-score is measured in terms of standard deviations from the mean. If a Z-score is 0, it indicates that the data point's score is identical to the mean score

$$z = (x - \mu) / \sigma$$

12. **T-Test**

A t test is a statistical test that is used to compare the means of two groups. It is often used in hypothesis testing to determine whether a process or treatment actually has an effect on the population of interest, or whether two groups are different from one another.

13. **PERCENTILE**

A percentile is a comparison score between a particular score and the scores of the rest of a group. It shows the percentage of scores that a particular score surpassed. For example, if you score 75 points on a test, and are ranked in the 85 th percentile, it means that the score 75 is higher than 85% of the scores.

14. **ANOVA**

Analysis of Variance (ANOVA) is a statistical formula used to compare variances across the means (or average) of different groups. A range of scenarios use it to determine if there is any difference between the means of different groups.

15. **HOW CAN ANOVA HELP?**

- ANOVA is helpful for testing three or more variables. It is similar to multiple two-sample t-tests. However, it results in fewer type I errors and is appropriate for a range of issues. ANOVA groups differences by comparing the means of each group and includes spreading out the variance into diverse sources.
- ANOVA, or its non-parametric counterparts, allow you to determine if differences in mean values between three or more groups are by chance or if they are indeed significantly different. ANOVA is particularly useful when analysing the multi-item scales common in market research.
- The researchers can take note of the sugar levels before and after medication for each medicine and then to understand whether there is a statistically significant difference in the mean results from the medications, they can use one-way ANOVA